

Claims

What is claimed is:

Sub A' ① A method of regulating or controlling nitric oxide production in a mammalian subject comprising administering to the mammal a nitric oxide-regulating ^{comp} amount of an arginine-rich peptide, oligopeptide, or protein inhibitor of nitric oxide synthase.

2. The method of claim 1, wherein the nitric oxide synthase is nNOS-II.

Sub A' ③ The method of claim 1, wherein the inhibitor is N^G-methyl-L-arginine.

④ The method of claim 1, wherein the inhibitor is N^G-nitro-L-arginine.

5. The method of claim 1, wherein the inhibitor is a peptide or oligopeptide.

⑥ The method of claim 1, wherein the nitric oxide production is increased.

⑦ The method of reducing the rate of nitric oxide production in a mammalian subject comprising administering to the mammal a nitric oxide inhibiting amount of a peptide, oligopeptide, or protein inhibitor of the nitric oxide synthase of claim 1.

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8. The method of reducing the rate of nitric oxide production in a mammalian subject comprising administering to the mammal a nitric oxide inhibiting amount of a peptide, oligopeptide, or protein inhibitor of the nitric oxide synthase of claim 2.

9. The method of claim 1, wherein the nitric oxide production is decreased.

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10. A method of preventing or treating a nitric oxide-mediated disease or condition in a mammalian subject comprising administering to the subject in need of such prevention or treatment a therapeutically effective amount of a peptide, oligopeptide or protein inhibitor of nitric oxide synthase.

11. The method of claim 10, wherein the nitric oxide synthase is nNOS-II.

12. The method of claim 10, wherein the nitric oxide synthase is a mammalian brain-derived nitric oxide synthase (NOS) protein purified to an activity at least 6,360-fold, said protein having a denatured molecular mass as determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis under reducing conditions of about 105 kD, and a native homodimeric molecular mass as determined by gel filtration of about 230 kD, requiring FAD, FMN, Ca^{2+} and tetrahydrobiopterin cofactors for the production of nitric oxide either from L-arginine, or an analog or derivative thereof, or from an arginine-rich peptide, oligopeptide, or protein substrate.

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13. The method of claim 10, wherein the inhibitor is N^G-methyl-L-arginine.

14. The method of claim 10, wherein the inhibitor is N^G-nitro-L-arginine.

15. The method of claim 10, wherein the inhibitor is a peptide or oligopeptide.

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